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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,487	02/22/2002	Kioan Cheon	YPL-0025-P	8488

23413 7590 07/15/2003

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EXAMINER

DATSKOVSKIY, MICHAEL V

ART UNIT	PAPER NUMBER
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2835

DATE MAILED: 07/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

57A

Office Action Summary	Application No. 10/080,487	Applicant(s) CHEON, KIOAN	
	Examiner Michael Datskovsky	Art Unit 2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 22 February 2002.

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-24 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☐ Claim(s) 1, 6, 13 and 24 is/are rejected.

7) ☐ Claim(s) 2-5, 7-12 and 14-23 is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on 22 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some * c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the a pump including an inverter having a converter for converting the conventional DC supplied from the power supply into AC (claim 24) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 14 and 21 are objected to because of the following informalities: Claims 14 and 21 recites the limitation "the fan" in lines 3 and 1 respectively. There is insufficient antecedent basis for this limitation in the claim.. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 6 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Cheon (US Patent 5,731,954).

Cheon teaches a computer, Fig.1, having a housing 7 defining an interior space and a heat-producing component - CPU 8 installed inside the housing 7; a heat-exchanging device 12 in a thermally conductive contact with the heat-producing component 6 and having a passageway extending between an inlet port and an outlet port; a heat dissipation device having a reservoir 48 storing a liquid coolant, said reservoir having an inlet opening 54 and an outlet opening 56 spaced at predetermined distance from each other, a divider wall 58, and a plurality of radiating fins 44 installed on an outer surface of the reservoir so as to be capable of exchanging heat with the reservoir; a first conduit 72 extending between the outlet port of the heat exchanging device 12 and the inlet opening of the reservoir; a second conduit 74 extending between the outlet opening of the reservoir and the inlet opening of the heat exchanging device; a pump 50 for pumping the liquid coolant out from the reservoir; and a separating wall separating the heat dissipating device from the interior space. Cheon teaches furthermore said heat

exchanging device 12 includes a cooling plate (see fig.2) having inside a serpentine created by dividers 24.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cheon. Cheon teaches all the limitations of the claim except said pump includes an inverter having a converter for converting the conventional DC supplied from the power supply into AC. Official notes is taken that it is well known in the art to convert Dc into AC to provide the power supply to AC driven devices in a computer (fans pumps e.g.). Applicant has not provided any particular electrical diagram to illustrate such a device. It would have been obvious to one skilled in the art at the time invention was made to provide the power supply to AC driven devices in a computer, as it is well known in the art.

Allowable Subject Matter

7. Claims 2-5, 7-12 and 14-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: The computer housing is a tower case (claims 2-3 and 19-23); the computer housing is a rack mounting case (claim 4); a fan disposed to one end of the heat dissipation device (claim 5); the heat-producing component is a power supply, and the heat exchanging device includes a heat sink on which the heat-producing components are installed and which has a channel and a U-shaped conduit fitted into the channel (claims 7-8); the heat-producing component is a power supply, and the heat exchanging device includes a hermetic container surrounding said power supply and containing an insulating oil functioning as the liquid coolant (claims 9-10); the heat-producing component is a hard disk drive (claims 11-12); a temperature sensor installed at one side of the cooling plate (claim 14); the CPU is a socket CPU connected with a CPU socket and wherein the heat exchanging device further includes a securely contacting means having a crossed compression plate having a fastening thread (claims 15-16); the heat producing component is a memory device and the heat exchanging device includes two cooling plates located on two sides of the memory device (claim 17); the pump is installed inside the reservoir (claim 18).

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9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cheon (US Patent 6,234,240); Koizumi et al (US Patent 5,323,847); Yu Ben Has (French Patent FR2793900 A3) and Shin et al (Japan Patent JP406097338A).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Datskovsky whose telephone number is (703) 306-4535. The examiner can normally be reached on Mn - Fry 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on (703) 308-4815. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Patent Examiner

Michael Datskovsky



June 30, 2003